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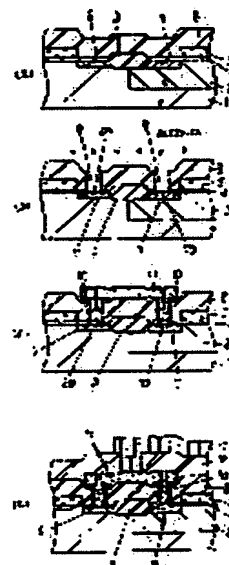
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(54) SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF

(57)Abstract:

PURPOSE: To prevent the upward diffusion of silicon in source and drain regions by coating source and drain contact regions, where n-type impurities having a concentration which does not exceed such limiting concentration as to change conductive form are added, with a silicon compound film of metal having a high melting point.

CONSTITUTION: N and p-type source and drain regions 6 and 7 are formed and after opening contact apertures 9 at an insulating film 8 which is formed on the above regions, As ions are implanted at a concentration which does not exceed such a limit as to make conductive types of p-type source and drain regions reverse from the contact apertures to the surfaces of the source and drain regions when the whole processes come to an end and then, such an ion implantation allows the surface of the source and drain regions to contain As. Then the contact apertures 9 are coated with silicide films 10 and a W wiring 11. In this way As where its concentration does not deteriorate electrical characteristics is added to the source and drain regions in an n-channel as well as a p-channel as well and yet, in the vicinity of the surface of the above regions. As a result, the upward diffusion of silicon in the source and drain regions which is performed towards a W wiring layer through silicide films 10 is suppressed even though heat treatment to make a BPSG film 12 formed on the W wiring 11 flow is carried out.



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